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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/145,982 09/03/98 HASE

T 684,2728

005514 MMC2/0327  
FITZPATRICK CELLA HARPER & SCINTO  
30 ROCKEFELLER PLAZA  
NEW YORK NY 10112

EXAMINER

NGUYEN, H

ART UNIT

PAPER NUMBER

2851

DATE MAILED:

03/27/01

Please find below and/or attached an Office communication concerning this application for proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.  
09/145,982

Applicant(s)  
Hase

Examiner  
Nguyen, Hung Henry

Group Art Unit  
2851



☒ Responsive to communication(s) filed on Amendment filed 2/26/2001

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-7, 9, 11, 12, and 14-18 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☒ Claim(s) 6, 7, 9, 14, and 16-18 is/are allowed.

☒ Claim(s) 1-5, 11, 12, and 15 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☒ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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## DETAILED ACTION

### *Claim Rejections - 35 U.S.C. § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 12, the limitation of claim 12 is merely a repetition of claim 1.

### *Claim Rejections - 35 U.S.C. § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5, 11-12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishi et al (U.S.Pat. 5,883,704).

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As to claims 1-5, 11-12 and 15 Nishi et al (fig.1-2, and 47) disclose an exposure system comprising substantially all of the limitations of the instant claims such as: a laser light source having as short wavelength as "ArF excimer laser light" for illuminating the reticle (see col.52, line 58); a projection optical system for projecting an image formed on the reticle onto a substrate (see fig.47) and gas purging means for replacing the spaces (533, 535) containing the optical elements by nitrogen gas which "does not absorb the ArF excimer laser light and prevents the production of the impurity such as fog due to the laser energy" (see col.54, lines 25-29) and "it is not preferable that air including oxygen is used" (see col.51 lines 12-13). Nishi does not expressly disclose the illumination light source being "F2 excimer laser". However, Nishi's exposure apparatus can be used "in the case where the exposure illumination light is a laser beam emitted from the excimer laser light source and having a wavelength of 100-300nm" (see col.48, lines 36-38) and "the gas supplied to the spaces 533, 535 is not limited to the nitrogen gas, but *various gases or liquids can be used in accordance with the kind of the illumination light*". In response to the office action, applicant has amended the independent claims 1, and 15 that changes the "ultraviolet light" to "F2 excimer laser". Then, applicant argued that "Particularly, the F2 laser has an absorption band also with respect to water. This is because the wavelength thereof (157nm) is shorter than that (193nm) of the ArF excimer laser. Thus, when a F2 excimer laser is used as the exposure light, not only should the oxygen and ozone, but also, wafer should be desirably removed". This is not found to be persuasive because in view of Nishi's teachings, "the excimer laser light source having a wavelength of 100-300nm", it would have been obvious to one having

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ordinary skill in the art at the time the invention was made to select F2 excimer laser as the light source for illuminating the reticle as specified in claims 1-5, 11-12 and 15 of the instant application and the selection of any of these known excimer light source would be within the level of ordinary skill in the art (for instance, see instant specification page 17, lines 22-27). Finally, applicant argued "the Nishi et al patent, however, does not mention anything about the removal of water". The examiner would like to remind the applicant that it is the claims that define the claimed invention and it is claims, not specifications that are anticipated or unpatentable. (See constant v. Advanced Micro-Devices Inc., 7 USPQ2d 1064). The limitations on which the applicant relies "about the removal of water" are not stated in the claims. A reading of the claims provides no distinguish whatsoever between the claimed invention and the cited reference.

***Allowable Subject Matter***

5. Claims 6-7, 9, 14, 16-18 are allowed.

***Response to Applicant's Amendment***

6. Applicant's amendment have been entered. Applicant's argument have been considered carefully but have been traversed in view of the new ground of rejection as set forth above.

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7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. Any inquiry concerning this application or earlier communications from the examiner should be directed to Henry Hung Nguyen whose telephone number is (703) 305-6462.

Any inquiry of a general nature or relating the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

hvn 3/25/2001

  
**RUSSELL ADAMS**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2800**



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